

Marks of Boundedness of the Solutions of Linear Differential Equations With Some Argument Retardations SOV/20-125-1-10/67

A similar theorem is formulated for the case that  $\lambda_j$  are linear operators in the complex Banach space and  $a_j$  are continuous bounded functions.

There are 5 Soviet references.

ASSOCIATION: Odesskiy gidrometeorologicheskiy institut (Odessa Hydrometeorological Institute)

PRESENTED: October 13, 1958, by I.G.Petrovskiy, Academician

SUBMITTED: October 9, 1958

Card 2/2

ACC NR: AP6036238

SOURCE CODE: UR/0038/66/030/005/0981/0992

AUTHOR: Rekhlitskiy, Z. I.

ORG: Odessa Hydrometeorological Institute (Odesskiy gidrometeorologicheskiy institut)

TITLE: On the stability of solutions of differential-difference equations with periodic coefficients

SOURCE: AN SSSR. Izvestiya. Seriya matematicheskaya, v. 30, no. 5, 1966, 981-992

TOPIC TAGS: differential equation, difference equation, complex function, linear differential equation

ABSTRACT: A study is made of the equation

$$\frac{dy}{dt} - p(t)y(t - ma) = f(t) \quad (0 < t < \infty), \quad a > 0,$$

where  $p(t + na) = p(t)$  is a continuous complex function ( $m, n$  are natural numbers). The author establishes the necessary and sufficient criteria for limiting solutions of this equation for all constraints  $f(t)$ , and the results obtained are converted into differential-difference equations of higher orders

$$y^{(n)} - \sum_{k=0}^{n-1} p_k(t) y^{(k)}(t - ma) = f(t) \quad (0 < t < \infty),$$

where

$$p_k(t + a) = p_k(t), \quad a > 0, \quad k = 0, 1, 2, \dots, n-1.$$

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UDC: 517.9

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The primary result of the analysis is stated in the theorem: Consider the problem

$$\frac{dy}{dt} - p(t)y(t-ma) = f(t) \quad (0 \leq t < \infty),$$

$$y(t) = \psi(t) \quad (-ma \leq t \leq 0), \quad a > 0,$$

where  $p(t+na) = p(t)$  is a continuous complex function,  $m, n$  are integers  $> 0$ . In order for this problem to have bounded solutions  $y(t)$  at all limiting and continuous functions  $f(t)$ , it is necessary and sufficient that all roots  $z$  of the set of equations

$$\Delta_n(z, 0) = 0, \quad 0 \leq \theta \leq a,$$

for all  $\theta (0 \leq \theta \leq a)$  lie outside the unit circle  $|z| > 1$ . Here  $\Delta_n(z, \theta)$  is the  $n^{\text{th}}$  order determinant consisting of the functions

$$\Delta_n(z, 0) =$$

$$= \begin{vmatrix} 1 - z \sum_{k=0}^{\infty} a_k^{(0)}(\theta) z^{mk} & 1 - z \sum_{k=0}^{\infty} a_k^{(1)}(\theta) z^{mk} & \dots & 1 - z \sum_{k=0}^{\infty} a_k^{(n-1)}(\theta) z^{mk} \\ -z \sum_{mk=0(n)} a_k^{(0)}(\theta) z^{mk} & 1 - z \sum_{mk=-1(n)} a_k^{(1)}(\theta) z^{mk} & \dots & -z \sum_{mk=-(n-1)(n)} a_k^{(n-1)}(\theta) z^{mk} \\ \dots & \dots & \dots & \dots \\ z \sum_{mk=n-2(n)} a_k^{(0)}(\theta) z^{mk} & -z \sum_{mk=n-3(n)} a_k^{(1)}(\theta) z^{mk} & \dots & 1 - z \sum_{mk=-1(n)} a_k^{(n-1)}(\theta) z^{mk} \end{vmatrix}$$

and the coefficients  $a_k^{(\ell)}(\theta)$  have the forms

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$$a_k^{(l)}(0) = \int_0^a p(\tau_k + (km+l)a - 0) d\tau_k \times \\ \times \int_{\tau_k}^{\tau_{k-1}} p(\tau_{k-1} + ((k-1)m+l)a - 0) d\tau_{k-1} \dots \int_{\tau_1}^{\tau_0} p(\tau_0 + (m+l)a - 0) d\tau_0, \\ a_0^{(l)}(0) = 1 \quad (l = 0, 1, 2, \dots, n-1), \quad 0 \leq l \leq a, \\ a_k^{(l+n)}(0) = a_k^{(l)}(0) \quad (k = 0, 1, 2, \dots).$$

Orig. art. has: 20 equations.

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Card 3/3

S/020/63/149/002/004/028  
B112/B180

AUTHOR: Rekhlitskiy, Z. I.

TITLE: Spectral tests for the stability of solutions to linear differential equations with periodic coefficient.

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 149, no. 2, 1963, 260-263

TEXT: The following result is obtained: The boundary value problem

$$y^{(n)} - \sum_{k=1}^{n-1} p_k(t) y^{(k)}(t) = f(t) \quad (0 < t < \infty),$$

$$y^{(k)}(0) = y_k \quad (k = 0, 1, \dots, n-1), \quad (6)$$

where  $p_k(t+a) = p_k(t)$  and  $f(t)$  are continuous functions, has a bounded solution for all bounded functions  $f(t)$  if and only if the condition

$$|\lambda(\theta)| < 1 \text{ npu } 0 < \theta < a, \quad \lambda(\theta) \in c \exp \left[ \int_0^a A(s+\theta) ds \right],$$

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S/020/63/149/002/004/028

Spectral tests for the stability of ... B112/B180

is fulfilled.  $A(t)$  is the matrix of the coefficients  $p_{ik}(t)$ , and  
" $\zeta_T$ " is the symbol for "spectrum".

ASSOCIATION: Odesskiy gidrometeorologicheskiy institut  
(Odessa Hydrometeorological Institute)

PRESENTED: October 3, 1962, by I. G. Petrovskiy, Academician

SUBMITTED: September 28, 1962

Card 2/2

16(1)

AUTHOR:

Rekhlitskiy, Z.I.

SOV/20-127-5-9/58

TITLE:

Tests for the Boundedness of Solutions of Differential Equations Having a Continuously Lagging Argument in a Banach Space

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 5, pp 971-974 (USSR)

ABSTRACT: On the semiaxis  $0 \leq t < \infty$  the author considers the differential equations

$$(1) \frac{dy}{dt} - \int_0^a y(t-s)dA(t,s) = f(t) \quad (0 \leq a < \infty)$$

$$(2) y^{(n)} - \sum_{k=0}^{n-1} A_k(t)y^{(k)}(t - \alpha_k(t)) = f(t) \quad (\alpha_k(t) \geq 0)$$

where  $f(t)$  and  $y(t)$  are continuous functions with values in a complex Banach space  $\tilde{E}$ ;  $A(t,s)$  and  $A_k(t)$  are linear operators in  $\tilde{E}$ .

The author gives necessary and sufficient conditions for the

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Tests for the Boundedness of Solutions of Differential Equations Having a Continuously Lagging Argument in a Banach Space SOV/20-127-5-9/56

boundedness of the solutions of (1) and (2). Special cases were already treated by the author in [Ref 3]. Altogether there are 2 very long theorems.

There are 6 Soviet references.

ASSOCIATION: Odesskiy gidrometeorologicheskiy institut (Odessa Hydro-meteorological Institute)

PRESENTED: April 27, 1959, by I.G. Petrovskiy, Academician

SUBMITTED: April 23, 1959

Card 2/2

REKLITSKIY, Z.I.

Stability of solutions of certain linear differential equations with  
a lagging argument in the Banach space. Dokl.AN SSSR 111 no.1:29-32  
N-D '56. (MLRA 10:2)

1. Odesskiy pedagogicheskiy institut imeni K.D.Ushinskogo. Predstav-  
leno akademikom I.G.Petrovskim.  
(Differential equations, Linear) (Spaces, Generalized)

REKHLITSKIY, Z.I.

Estimation of the growth of solutions to partial differential-difference equations of the parabolic type. Dokl. AN SSSR 162 no.4:  
759-762 Je '65. (MIRA 18:5)

1. Osskiy gidrometeorologicheskiy institut. Submitted December 11,  
1964.

REKILYAVTUS, G. Yu., (Engineer, Lithuanian SSR), and YERSHOVA, N. D. (Engineer, Latvian SSR), and RUBOV (Engineer, Estonian SSR)

"The status and prospects for the development of welding in the Baltic republics".

Report presented at the 3rd Baltic Conference on Welding, convened by the Sovnarkhozes of the Lithuanian SSR, Latvian SSR, and Estonian SSR, 8-9 Apr 1964, Vilnyus.

[Avtomicheskaya SVARKA, No. 7, 1964 - p. 95]

L 12803-66 EWT(1)/EWT(m)/FCC/T DS/WW/GW

ACC NR: AP5028902

SOURCE CODE: UR/0138/65/000/011/0034/0035

AUTHOR: Karp, G. A.; Mayzelis, B. A.; Rekhman, A. N.; Trofimovich, D. P.; Freyman, A. V.; Shepelev, M. I.

56

ORG: Scientific Research Institute of Rubber and Latex Products (Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy)

TITLE: Study of the effect of stresses arising during the swelling of the gel on the quality of meteorological radiosonde envelopes

SOURCE: Kauchuk i rezina, no. 11, 1965, 34-35

TOPIC TAGS: radiosonde, gel, rubber, mechanical stress

ABSTRACT: In the manufacture of radiosonde envelopes, an important parameter is the magnitude of the stress arising in the course of swelling of the gel. The effect of this parameter on the tensile properties of type-150 envelopes was studied. The stress was varied by changing the duration of syneresis from 10 min to 7 hr, which caused changes in stress ranging from 5 to 11 kg/cm<sup>2</sup>. In order to characterize the tensile properties of envelopes of the same size but prepared in different ways, use was made of the so-called quality factor (ratio of ultimate elongation of envelope to ultimate elongation of sample). To determine this factor on an instrument for two-dimensional deformation, the ultimate elongations of samples cut out of envelopes with various stresses in the gel were measured. The ultimate elongations of these samples were all found to be equal on swelling and amounted to

UDC: 678.061:678.017:620.172.21

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I 12803-66

ACC NR: AP5028902

$\lambda = 8.8$ . On the basis of tests of samples and envelopes, the dependence of the quality factor of radiosonde envelopes was plotted versus the stress in the gel during swelling (see Fig. 1).

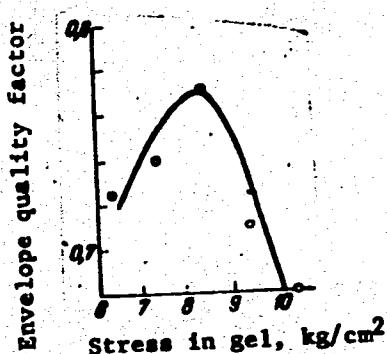


Fig. 1 Quality factor of type-150 envelopes vs. stress in gel during swelling

The following parameters are recommended for adoption in the manufacture of type-150 envelopes: gel swelling, up to  $\lambda = 4.2$ ; stress in gel during swelling,  $8 \pm 0.5 \text{ kg/cm}^2$ .

SUB CODE: 11 / SUBM DATE: none / ORIG REF: 007

jw

Card 2/2

REKHMAN, A. P.

8  
0  
0

*Chem* ✓ Mechanism of Arbuzov rearrangement. II. Reaction of  $\alpha,\beta$ -dibromo- and  $\alpha,\beta$ -dichloroethyl isoponid and  $\alpha,\beta$ -dibromo- and  $\alpha,\beta$ -dichloroethyl butyl ethers with phosphites.

V. S. Abramov and A. P. Rekhman (S. M. Kirov Chem. Technol. Inst., Kazan). *Zhur. Organicheskoi Khim.* 26, 103-7;

*J. Gen. Chem. U.S.S.R.* 26, 171-4 (1950) (Engl. translation); cf. *C.A.* 49, 15857c. Keeping a mixt. of  $\text{BrCH}_2\text{CHBrOCH}_3$  or  $\text{BrCH}_2\text{CHBrOBu}$  with either  $(\text{EO})_2\text{P}$  or  $(\text{BuO})_2\text{P}$  3-4 days results in progressive change of  $n$  and  $d$  of the mixt., indicating the formation of intermediate adduct. On heating these to 80-130° the 2nd stage of the Arbuzov reaction took place with evolution of RX and formation of the phosphonates. Thus were prep'd.  $\text{BrCH}_2\text{CH}(\text{OR}')\text{PO}(\text{OR})_2$  ( $\text{R}, \text{R}' = \text{b.p.}, n_{D}^{20}, d_{40}^{\circ}$ , resp.); *Et*, *iso-Pr*, *b*, 130-3°, 1.4548, 1.2691; *Et*, *Bu*, *b*, 125-7°, 1.4570, 1.2499; *Bu*,

*iso-Pr*, *b*, 173-6°, 1.4513, 1.1520; *Bu*, *Bu*, *b*, 182-5°, 1.4534, 1.1344. *Cl* analogs: *Et*, *iso-Pr*, *b*, 138-9°, 1.4410,

1.1113; *Et*, *Bu*, *b*, 149-51°, 1.4418, 1.0871; *Bu*, *iso-Pr*, *b*, 161.5-4°, 1.4438, 1.0423; *Bu*, *Bu*, *b*, 180-3°, 1.4428,

1.0245. An attempt to follow the reaction kinetics by evolution of RX showed a closer adherence to first, then to second order reaction. Treatment of the halogen derivs. with alc. KOH gave  $(\text{RO})_2\text{P}(\text{O})\text{C}(\text{CH}(\text{OR}')\text{PO}(\text{OR})_2$ ; *Et*, *iso-Pr*, *b*, 115-17°, 1.4379, 1.0462; *Et*, *Bu*, *b*, 134-6°, 1.4430, 1.0485; *Bu*,

*iso-Pr*, *b*, 182-5°, 1.4432, 1.0157. G. M. Kosolapoff

*M. Scott*

SHVETSOV, A.A., inzh.; REKHTMAN, L.A., inzh.

Welding in the manufacture of planters. Svar. proizv. no.10:  
33-34 O '61. (MIRA 14:9)

1. Zavod "Sibsel'mash".  
(Agricultural machinery--Welding)

REKHOVSKIY, Yu.D.; AFANAS'YEV, V.K.

Specialized crews for bridge painting. Put' i put.khoz.  
5 no.7:31 J1 '61. (MIRA 14:8)

1. Rukovoditel' gruppy Nauchno-issledovatel'skogo instituta  
mostov (for Rekhovskiy). 2. Zamestitel' nachal'nika Lenir'rad-  
Finlyandskoy distantsii, Oktyabr'skoy dorogi (for Afanas'yev).  
(Railroad bridges--Painting)

REKHOVSKIY, Yu. D.; AFANAS'YEV, V. K.

Specialized crews for bridge painting. Put' i put. khoz. 5  
(MIRA 14:8)  
no. 7:31 J1 '61.

1. Rukovodite] gruppy Nauchno-issledovatel'skogo instituta  
mostov (for Rekhovskiy). 2. Zamestitel' nachal'nika Leningrad-  
Finlyandskoy distantsii, Oktyabr'skoy dorogi (for Afanas'yev).  
(Railroad bridges--Painting)

REKHOVSKIY, Yu.D., inzh.; AFANAS'YEV, V.K., inzh.

Introduction of a new technology of cleaning and painting bridges.  
Sbor. trud. NII mostov no. 7:129-133 '62. (MIRA 16:12)

REKHOVSKIY, Yu.D., inzh. (g. Leningrad)

Maintenance and repair of railroad bridges abroad. Zhel.dor.transp.  
40 no.10:87-92 O '58. (MIRA 11:12)  
(Railroad bridges--Maintenance and repair)

REKHOVSKIY, Yu.D., inzh.; SHPARBERG, A.M., inzh. (Leningrad)

Flame cleaning of metal bridges. Puti i put. khoz. no.4:24-25  
Ap '59. (MIRA 13:3)  
(Metal cleaning)  
(Railroad bridges--Maintenance and repair)

REKHOVSKIY, Yu.D., inzh.

Use of an air curtain in bridge painting. Put' i put.khoz.  
no.12:10-11 D 59. (MIRA 13:4)

(Railroad bridges--Painting)  
(Spray painting)  
(Air curtains)

REKHOVSKIY, Yu.D.; FOKANOV, P.I.

New technology for bridge painting. Put' i put.khoz.4  
no. 5:22 My '60. (MIRA 13:11)

1.Rukovoditel' gruppy Nauchno-issledovatel'skogo instituta  
mostov (for Rekhovskiy). 2. Zamestitel' nachal'nika distantsii,  
stantsiya Volkovstroy, Oktyabr'skoy dorogi (for Fokanov).  
(Railroad bridges--Painting)

DASHEVSKIY, T.B.; KOVAL', V.A.; LIKHNTSKIY, G.V.; MUMZI, G.F.; REKHTER, I.N.

Dimensional series and standard types of weighing equipment for  
metallurgical plants. Izm.tekh. no.4:22-27 Ap '63. (MIRA 16:5)  
(Weighing machines)

SHAMSHORIN, A.A.; REKHTER, M.A.; NESTEROVA, I.P.

Synthesis of 11-aminoundecanoic acid from castor oil. Uch.zap.  
Kiev. un., 68:S2-S3 '63 (cover '64).

(KTRIA 18:12)

REKHTER, S. D., TEVS, N. G. and N. S. KOVERDIAEV

Reduktorostroenie na Novo-Kramatorskom mashinostroitel'nom zavode imeni I. V. Stalina. Moscow, Nashgiz, 1946. 339 p. illus.

Reduction gear construction at the Novo-Kramatorsk I. V. Stalin machine-building plant.

DLC: TJ202.T4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

2114 REKHTEE, S. D. AND NEZHEVENKO, G. S.

Tokarnoye Delo. (V Pomoshchi' Tokaryu Mts.) Kiev. Goste Khizdat USSR, 1954  
184 s. s. Ill.; 1 L. Chert. 20sm. (V Pomoshchi' Sel' Skomu Stroitel' Stvu  
I Mts.) 7.000 Ekz. 4r. 95k. V Per.-Ja UKR. Yaz  
(54-55480) 621.941

NAYGUZ, N.I.; BERUL', G.M.; REKHTER, V.Sh.

Three-position automatic presses for the manufacture of coal-graphite products. Kuz.-shtam.proizv. 4 no.8:30-33 Ag '62.  
(MIRA 15:8)

(Hydraulic presses) (Graphite)

137-58-6-11377

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 18 (USSR)

AUTHOR: Rekhtman, A.Ya.

TITLE: Peculiarities of the Motion of Gases in Recirculating Steel Smelting Furnaces (Osobennosti dvizheniya gazov v retsirkulyatsionnoy staleplavil'noy pechi)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 37, pp 354-371

ABSTRACT: An examination is made of the motion of the gases in the working space and checker port of recirculating steel smelting furnaces with simultaneous fueling from two sides and smoke exiting through both checker ports. The work was done in a 1:7-scale model of a 10-t oven. Water and air were used as working fluids. As the flows from the burners meet, a deformation of the flow occurs in the center of the furnace, whereupon the merging stream rises, strikes the roof, and separates to flow toward the ports. There is vigorous motion of the ascending streams at the front wall. One-third of the way from the rear wall, a portion of the current above the bath surface tends toward the rear wall and spreads over it to form circulation pockets with a high rate of rotation. A portion of the combustion

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137-58-6-11377

• Peculiarities of the Motion (cont.)

products is injected into the stream, while part goes into vertical ducts. The motion of the gases is symmetrical only if the initial quantities of motion are equal and if the axes of the nozzles are strictly aligned toward each other. The number of times that recirculation occurs depends upon the flow through the nozzles. Investigation of variants with roofs of different positions and shapes, vertical and inclined front walls, and different positions of the nozzles shows the following: the higher the roof, the more uniformly it is washed by combustion products and the more uniform is the distribution thereof through the vertical ducts. A sloping front wall operates under less severe service conditions. The nature of the gas flow in the furnace may be sharply modified by changing the number and position of the nozzles. Provision of a jacket at the inlet to the working space is not justified, since recirculation is reduced thereby, while the orderliness of the gas motion is not improved.

G.G.

1. Furnaces--Performance    2. Gases--Motion

Card 2/2

GLINKOV, M.A.; REKHIMAN, A. Ya.

Effect of aerodynamics on dust deposition in slag basins and vertical flues. Izv.vys.ucheb. zav.; chern. met. no.3:161-171 '61.

(MIRA 14:3)

1. Moskovskiy institut stali.

(Metallurgical furnaces—Aerodynamics)

SOV/124-58-10-11031

Translation from: Referativnyy zhurnal, Mekhanika, 1957, Nr 10, p 46 (USSR)

AUTHOR: Rekhtman, A. Ya.

TITLE: Special Features of the Gas Flow in a Recirculating Steel Furnace  
(Osobennosti dvizheniya gazov v retsirkulyatsionnoy staleplavil'noy pechi)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 37, pp 351-371

ABSTRACT: Bibliographic entry

Card 1/1

REKHTMAN, Anna Yakovlevna, kandidat tekhnicheskikh nauk; MARKOV, Boris Lazarevich, kandidat tekhnicheskikh nauk; KRYVANDIN, Vladimir Alekseyevich, kandidat tekhnicheskikh nauk; GLINKOV, M.A., redaktor; LANOVSKAYA, M.R., redaktor izdatel'stva; BERLOV, A.P., tekhnicheskiy redaktor

[Plant laboratories making hydraulic models of metallurgical furnaces]  
Zavodskaiia laboratoriia gidravlicheskogo modelirovaniia metallurgicheskikh pechei. Moskva, Gos. nauchno-tekh. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 83 p.  
(Furnaces--Models)

*REKHMAN A.Y.*

Rakov, Institute staff. D. Representatives:

Ed.: Ye. A. Borko; Ed. of Publishing House: Ma. D. Representatives:

Primeneniye visokorodnogo stekloplavil'nogo protivozvushchenniya (Use of Oxygen in Glassmaking) Moscow, Metalurgizdat, 1957, 118 p.

(Series Ira: Stomik, 37) Errata slip inserted. 3,500 copies printed.

Ed.: Ye. A. Borko; Ed. of Publishing House: Ma. D. Representatives:

Tech. Ed.: Ye. B. Vaynshtern; Editorial Board of the Institute: Professor: R. N. Ogorodnik, Candidate of Technical Sciences, Doctor: N. F. Gudkov, Academician, Doctor: M. A. Glinskij, Doctor: N. F. Gudkov, Academician, Candidate of Technical Sciences, Doctor: A. A. Zhukhovitskij, Doctor: V. P. Yelutin, Doctor: Professor: A. A. Zosharuk, Doctor: Professor: I. M. Kudrin, Doctor: Professor: A. P. Lebed'ev, Doctor: Professor: I. M. Likhachev, Doctor: Professor: A. P. Livshits, Doctor: Professor: I. M. Likhachev, Doctor: Professor: I. M. Pavlov, Corresponding Member, Academy of Sciences, USSR; I. M. Pavlov, Doctor: Professor: and A. N. Pochvinayev, Doctor: M. G. Rubkin, Doctor: Professor: and A. N. Pochvinayev, Doctor: Professor

PURPOSE. This collection of articles is intended for scientific, industrial, chemical, and metallurgical engineers, physicists, and students.

CONTENTS: This book is a collection of scientific research papers on the utilization of oxygen in steelmaking. The use of oxygen blast for the intense friction of fuel combustion and the introduction of oxygen into liquid metal in order to oxidize Ad. mixtures are along the topics discussed. The use of oxygen in steelmaking is also discussed. Several articles deal with the heating and processing of steelmaking in blast furnaces. Individual articles deal with the economics of steelmaking with oxygen blast and with the optimum conditions for effective utilization of oxygen. No personal names are mentioned. References follow each article.

Ur'ozh'ev, [Candidate of Technical Sciences], R. M. Tumoy, [Engineer], and D. D. Verlukh [Engineer]. Gas Content in the Open-hearth Bath

The author discusses the content of oxygen, hydrogen, and nitrogen present in the open-hearth bath at various stages of the heat

Banov, M.P. [Candidate of Economic Sciences], and V.A. Romashko, [Candidate of Technical Sciences]. Technical and Economic Efficiency of Oxygen Utilization in Open-hearth Processes 124

Ogne, G. M. Doctor of Technical Sciences, Professor, Yu. V. Kryzakovsky [Candidate of Technical Sciences], and V. P. Grigor'yev [Engineer]. Intensifying Open-hearth Convection of High-phosphorus Pig Iron by Introducing Oxygen Into the Bath 138

Ovse, G. M., Yu. V. Kryzakovsky, Ye. A. Kapustina, and V. P. Grigor'yev. Efficiency of Oxygen Utilization For Enriching Ad. in the Open-hearth Convection of High-phosphorous Pig Iron 152

The author describes comparative industrial tests of different stages of the open-hearth process with and without the use of oxygen.

Ovse, G. M. Selecting the Proper Method for Open-hearth Conversion of High-phosphorous Pig Iron 166

The author suggests a composition of open-hearth charge, which contains with oxygen blast, is supposedly more efficient in desphosphorization.

Abramov, Ye. V. [Candidate of Technical Sciences, Doctoral Candidate], and O. I. Demin [Candidate of Technical Sciences, Doctoral Candidate]. Material and Heat Balances of the Open-hearth Scrap Process With Oxygen Blast 177

The author discusses the use of oxygen blast for the intensification of fuel combustion, for the maitdown, for investigations of heat and material balances of open-hearth processes with and without oxygen blast.

Kudrin, V.A. Temporary Overoxidation of the Open-hearth Bath During Oxygen Blast 214

Abramov, Ye. V. and V.A. Kudrin. Course of Carbon Oxidation in the Open-hearth Bath During Oxygen Blast 232

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Use of Oxygen in Steelmaking

SOY/2295

- Kudrin, V.A., and Ye. V. Abrosimov. Possibility of Decreasing Time of the Smelting Process Proper in the Open-hearth Bath During Oxygen Blast. 252  
The author presents a method of decreasing smelting time to 4 to 5 minutes, thus increasing production by 5 to 10 percent.
- Kryakovskiy, Yu. V. Dust Formation in the Open-hearth Furnace During the Scrap Process. 260
- Aleksandrova, A.I. [Candidate of Technical Sciences], G.M. Oryk, and R.P. Banniy. Making Steel From High-phosphorus Pig Iron. 281  
The authors discuss production data for the conversion of high-phosphorus pig iron, including heat time, silk formation, and the effect of oxygen on fuel consumption.
- Olinikov, N.A. Doctor of Technical Sciences [Professor], and N.S. Vorotov [Candidate of Technical Sciences]. Heat Exchange Above the Bath of a Recirculation Steel-smelting Furnace. 305  
This article deals with the thermal and technical aspects of a 10-ton industrial recirculation steel-smelting furnace with simultaneous fuel feed from both ends accompanied by the application of oxygen-enriched air.
- Krivandin, V.A. [Candidate of Technical Sciences]. Study of Combustion in the Recirculation Steel-smelting Furnace. 330  
The author describes an investigation of the combustion processes, furnace gasses, and composition of the exhaust gases.
- Petrovskiy, A.V. [Candidate of Technical Sciences, Docent]. Special Characteristics of Gas Flows in a Recirculation Steel-smelting Furnace. 354  
The author discusses investigations made in a model furnace for the study of gas flow, the distribution of combustion products, and the distribution of pressure on the walls.
- Dzabin, G.I. [Docent]. Best Balances of a Recirculation Steel-smelting Furnace. 372
- Molchanov, N.O. [Candidate of Technical Sciences, Docent]. Comparison of Gasous Fuel Combustion Processes in Furnaces With Continuous and Recirculating Gas Flows. 377
- Lavrikov, B.G. [Doctor of Technical Sciences, Professor], L.A. Shestopal [Candidate of Technical Sciences, Docent], and N.N. Tsvetkov [Engineer]. Quality of Steel Made in a Recirculation Steel-smelting Furnace. 395  
The author investigates the qualities of recirculation-furnace steels, comparing them with ordinary open-hearth steels.

AVAILABILITY: Library of Congress  
Card 9/9

00/sec

10-12-59

IV

GLINKOV, M.A.; REKHTMAN, A.Ya.; NEVEDOMSKAYA, I.N.

Gas flow and pressure distribution in multichamber holding  
furnaces. Stal' 22 no.1:82-86 Ja '62. (MIRA 14:12)

1. Moskovskiy institut stali.  
(Furnaces, Heating)

REKHTMAN, B.M.

Braun's anastomosis and its role in preventing postoperative complications in resection of the stomach. Vest.khir. no.5:  
34-39 '62. (MIRA 15:11)

1. Iz 2-y gospital'noy khirurgicheskoy kliniki (nach. - prof.  
Ye.V. Smirnov) Voyenno-meditsinskoy ordena Lenina akademii  
im. S.M. Kirova.

(STOMACH-SURGERY) (INTESTINES-SURGERY)

REKHTMAN, B.O.

Case of the developing of pernicious anemia into erythremia.  
Probl. Gemat. i perel. krovi 9 no.11:45-47 N '64. (MIRA 18:4)

1. Terapevticheskoye otdeleniye (zav. V.E.Golavskiy) Kamenets-Podols'koy mezhrayonnoy bol'nitsy imeni V.I.Lenina (glavniiy vrach N.S. Nesterov).

REKHTMAN, I.M.

Calculation of the quantity of sugar obtained in the separation  
of sirup. Sakh.prom.35 no.6:44-46 Je '61. (MIRA 14:6)

1. Mizochskiy sakharnyy zavod.  
(Sugar manufacture--Accounting)

REKHTMAN, M. E.

ogorodno-polevye otrazili Labor orginization and wages in suburban sovkhozes  
Moskva, Gos. izd-vo sel'khoz. i kolkhozno-kooperativnoi lit-ry, 1931-  
(51-16100)

HDI493.R9R4

GLINKOV, M.A., professor, doktor; REKHTMAN, M.Ya., kandidat tekhnicheskikh nauk.

Movement of gases in the hearth of open-hearth furnaces. Sbor. Inst. stali no. 31:285-317 '53. (MIRA 9:9)

1.Kafedra "Metallurgicheskiye pechi".  
(Open-hearth furnaces) (Gas flow)

REKHTMAN, F. G.

Uzagal'neni Manonichni Predstavennya Monentiv Nerivnosti Che- ishova. Khrk, Zap.  
Matem. T-va (4), 15:1 (1938), 49-80.

SO: Mathematics in the USSR, 1917-1947  
Edited by Kurosh, A. G.,  
Markushevich, A. I.,  
Rashovskiy, P. K.  
Moscow - Leningrad, 1948.

KREYN, M.G.,; REKHTMAN, P.G.

New trend in the development of the theory of Chebyshev-Markev  
on limit values of integrals. Usp.mat.nauk. 10 no.1:67-78 '55  
(Integrals) (MIRA 8:6)

REKHTMAN, P.G.

Krein, M. G., and Rehtman, P. G. Development in a new direction of the Čebyšev-Markov theory of limiting values of integrals. *Uspehi Mat. Nauk* (M.S.) 10, no. 1 (63), 67-78 (1955). (Russian)

This is a continuation of Krein's paper [Uspehi Mat. Nauk (N.S.) 6, no. 4(44), 3-120 (1951); MR 13, 445] in which, among other things, the theory of absolutely monotonic functions on an infinite interval was deduced from the theory mentioned in the title, which deals with questions connected with moment problems. Here the general moment problem  $c_k = \int_E u_k(t)d\sigma(t)$  is dealt with when the set  $E$  consists of a point set with a single limit point. Markov's theorem on the maximum and minimum of  $\int_E \Omega(t)d\sigma(t)$  is correspondingly extended. As applications, the authors deduce theorems, some old and some new, on absolutely monotonic functions on a finite interval.

R. P. Boas, Jr. (Evanston, Ill.).

I - F/W

145

1

REKHTMAN, P. G.

USSR/Mathematics - Approximations

Jul/Aug 51

"Ideas of P. L. Chebyshev and A. A. Markov in the Theory of Limit Magnitudes of Integrals and Their Further Development," M. G. Kreyn, P. G. Rekhtman

"Uspek Matemat Nauk" Vol VI, No. 4 (44), pp 3-120

Discusses fundamental theorem concerning positive sequences, max mass, main properties of Chebyshev's system of functions, canonical representations of a positive sequence, existence of the main representations, motion of the masses of canonical representations, mech quadratures and soln of an extremal problem, Chebyshev-Markov inequalities, case of infinite integral, the phi-psi problem of Markov, and a min problem.

191T75

REKHTMAN-OL'SHANSKAYA, P.G.

REKHTMAN-OL'SHANSKAYA, P.G.

An assertion of Academician A.A. Markov. Usp.mat.nauk 12 no.3:181-187  
My-Je '57. (MIRA 10:10)

(Integrals)

REKHTZAMER, N.A.

Treatment of angina pectoris with a new spasmolytic drug  
chloracizine. Uch.zap.Inst.farm.i khimioter.AMN SSSR no.2:276-  
282 '60. (MIRA 15:10)

1. Terapevticheskiy sektor (zav. prof. B.V.II'inskiy) Instituta  
fiziologii im. I.P.Pavlova.  
(ANGINA PECTORIS) (PHENOTHIAZINE)

Report of the Bureau of the Height of Waves in Application of the Wave Gauge (VGM-47-TM). "Voprosy Gidrologii," No. 3, 1951, p. 10-34.

Several years ago measurements of the height and period of waves in the open sea (from ship, rafting or standing at anchor) were begun with the wave gauge VGM-47-TM, invented in 1947 by A. P. Korozov and N. I. Telyayev (see V. A. Sneshinskij, Prakticheskaya Oceanskaya (Practical Oceanography), Hydromet Press, Leningrad, 1951). Comparison of the readings of the instrument with the results of stereophotographs and theoretical considerations led to the following conclusions: (1) in low water regions (with depth of the order of half wave length) the wave gauge cannot be used during a strong swell; (2) errors connected with delination of the vertical axis of the receptor part and with the behavior of the buoy in rough crests can be very large; improvement of the existing design of the wave gauge in form of a freely floating buoy not connected with the ship will not free the gauge readings from these errors; (3) before more complete testings it is unconconomical to put the VGM-47-TM in series production. (ZhGekh., no. 6, 1955).

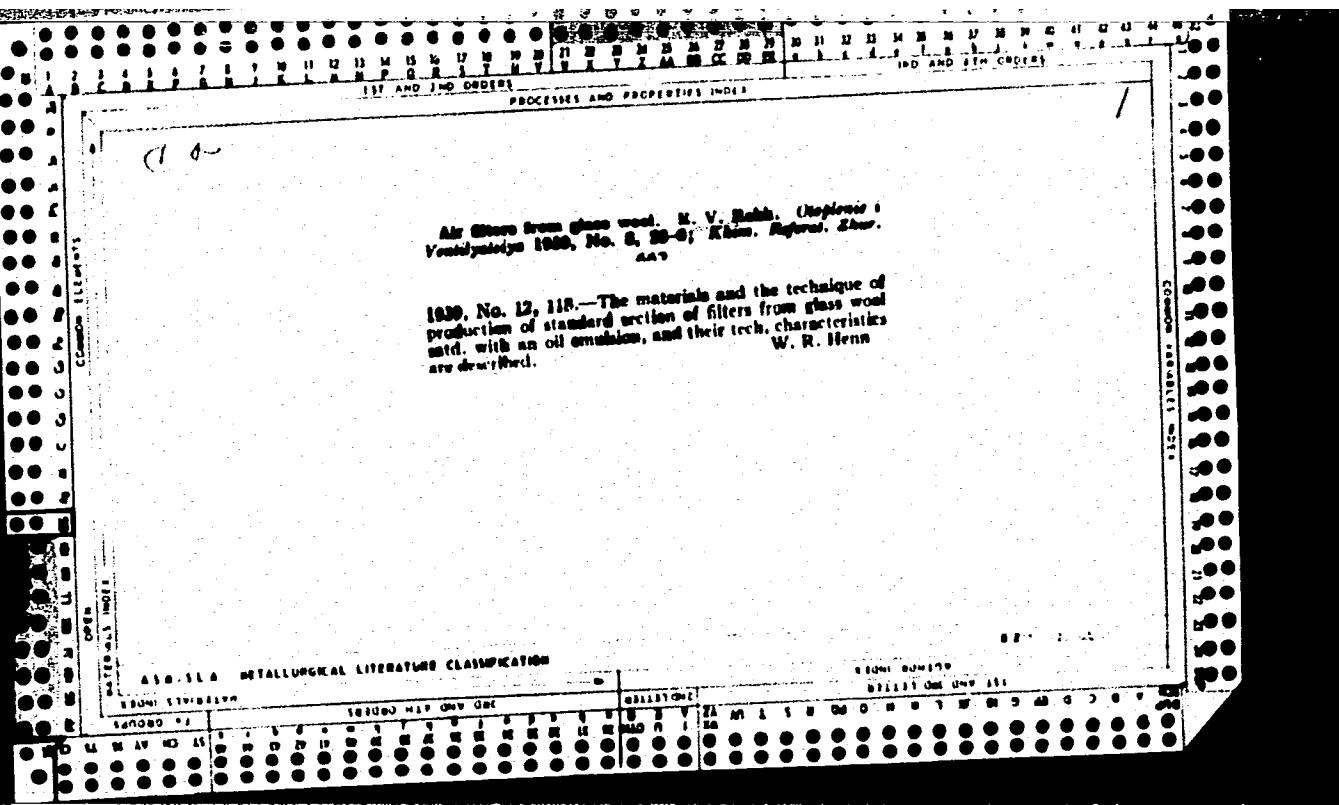
SC: Sum. No. 713, 9 Nov 55

2000-07-18

Testing of propeller hub flanges for Sam 22 Z engines--festigkeit der Verbindung  
Krauss-Maffei-Lansch-Kabe, Feilkericht 1: Dynamische Festigkeitsuntersuchung der  
Verbindung Gebr. Krauss-Maffei-Lansch-Kabe des Sam 22 B-Motors--by H. Dötsche  
Berlin-Hellendorf Deutsche Versuchsanstalt für Luftfahrt Oct 1934 vom Confid 1  
2000-07-18

Anchored propeller hub flanges are investigated because of repeated bolt failures.  
The tests consisted of exerting dynamic fatigue bending stresses of various types  
on given designs and a simple fracture and hole cracking occurred at the very  
short start testing; material defects could not be determined. A possible reason  
of the fatigue fracture could be the large flange diameter with its sharp interruption  
at the flange hub. A new flange is being designed for later tests. Fractographs  
and drawings are included.

Source: KRAUSS-MAFFEI & CO. INC. AND GERMANY AIR-TECHNICAL DRAWINGS,  
2000-07-18, 2000-07-18, Unclassified.



REKHARSKIY, V.I.  
REKHARSKIY, V.I.

Zonality and structure of the aureole of hydrothermally altered rocks with rare metal veins [with summary in English]. Geokhimiia no.3:257-264 '57. (MIRA 10:7)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.  
(Rocks) (Metals, Rare and minor)

BALKOV, P.P.; DASHEVSKIY, T.B.; KOVAL', V.A.; LIKHNITSKIY, G.V.; REKHTER,  
I.I.N.

Standardizing dial-plate heads for weighing devices. Standartizatsiya 24 no.5:30-32 My '60. (MIRA 14:3)  
(Weighing machines—Standards)

REKHTMAN, A.Ya., dots., kand.tekhn.nauk

Peculiarities of gas flow in a recirculating steel smelting furnace. Sbor. Inst. stali no.37:354-371 '57. (MIRA 11:3)

I.Kafedra metallurgicheskikh pechey Moskovskogo instituta stali im.  
I.V. Stalina.

(Smelting furnaces)  
(Gas flow)

YEROFEYEV, Nikolay Ivanovich; POLIKARPOV, A.D., inzh., retsenzent;  
KUROCHKIN, A.Ye., inzh., retsenzent; REKHTMAN, I.G., inzh.,  
retsenzent; SKOBELING, L.V., red.; USANOVA, N.B., tekhn. red.

[Gantry cranes] Portal'nye krany. Moskva, Morskoi transport,  
1962. 561 p. (MIRA 16:2)  
(Cranes, derricks, etc.)

REKHTZAMER, G. R. and PUGIN, A..A.

"Research of Wave Movement on Seas, Lakes and Reservoirs with Stereo-Photography"  
Publishing House for Hydro-Meteorology, Leningrad 1955.

PUGIN, Aleksandr Aleksandrovich; REKHTZAMER, Gay Rodionovich; POPOV, G.V., redaktor. LEONOVA, B.I., redaktor; FLAUM, M.Ya., tekhnicheskiy redaktor.

[Studies of waves on seas, lakes and reservoirs by means of the stereophotogrammetry; a practical manual] Issledovanie volnemii na moriakh, ozerakh i vodokhranilishchakh metodom stereofotogrammetricheskoi s"emki; prakticheskoe posobie. Leningrad, Gidrometeorologicheskoe izd-vo, 1955. 224 p. (MLRA 8:12)

(Waves)

ZDANOVICH, V.G., doktor tekhh. nauk, prof.; RAMM, N.S., kand. tekhn. nauk, st. nauchnyy sotr.; SHARIKOV, Yu.D., kand. tekhn. nauk, st. nauchnyy sotr.; YANUTSH, D.A., kand. tekhn. nauk, st. nauchnyy sotr.; CHERKASOV, I.A., kand. tekhn. nauk; ALEKSEYEV-SHEMYAKIN, V.P., nauchnyy sotr.; KOL'TSOV, V.V., nauchnyy sotr.; KOSHECHKIN, B.I., nauchnyy sotr.; SEMENCHENKO, I.V., nauchnyy sotr.; UGLEV, Yu.V., nauchnyy sotr.; KUZINA, A.M., starshiy laborant; KUDRITSKIY, D.M., kand. tekhn. nauk, dots., retsenzent; VEYNBERG, V.B., doktor tekhn. nauk, retsenzent; LOSHCHILOV, V.S., kand. geogr. nauk, retsenzent; REKHTZAMER, G.R., kand. tekhn. nauk, dots., retsenzent; KOZLYANINOV, M.V., kand. geogr. nauk, retsenzent; BUSHUYEV, A.V., inzh., retsenzent; ZAMARAYEVA, R.A., tekhn. red.

[Use of airborne methods to study the sea] Primenenie aerometodov dlia issledovaniia moria. Pod obshchei red. V.G.Zdanovicha. Moscow, Izd-vo Akad. nauk SSSR, 1963. 546 p. (MIRA 16:4)

1. Akademiya nauk SSSR. Laboratoriya aerometodov. 2. Laboratoriya aerometodov Akademii nauk SSSR (for Zdanovich, Ramm, Sharikov, Yanutsh, Cherkasov, Alekseyev-Shemyakin, Kol'tsov, Koshechkin, Semenchenko, Uglev, Kuzina).

(Aeronautics in oceanography) (Aerial photogrammetry)

ZDANOVICH, V.G., doktor tekhn. nauk, prof.; BABKOV, A.I., ml.  
nauchn. sotr.; YURKOVSKIY, O.A., ml. nauchn. sotr.;  
REKHTZAMER, G.R., dots., kand. tekhn. nauk; SHARIKOV, Yu.D.,  
st.nauchn.sotr.

[Methods of studying ocean currents from an airplane] Me-  
tody izuchenija morskikh techenii s samoleta. Moskva,  
Nauka, 1964. 227 p. (MIRA 18:3)

1. Akademiya nauk SSSR. Laboratoriya aerometodov. 2. Labo-  
ratoriya aerometodov Gosudarstvennogo geologicheskogo komi-  
teta SSSR (for Zdanovich, Babkov, Yurkovskiy). 3. Leningrad-  
skiy Gidrometeorologicheskiy institut (for Rekhtzamer).

ACC NR: AR6028079

(N)

SOURCE CODE: UR/0124/66/000/005/B063/B063

AUTHOR: Rekhtzamer, G. R.

TITLE: On the method of determining the turbulent diffusion coefficient in the ocean by underwater photography of a paint cloud

SOURCE: Ref. zh. Mekhanika, Abs. 5B384

REF SOURCE: Tr. Leningr. gidrometeorol. in-ta, v. 20, 1965, 187-193

TOPIC TAGS: fluid diffusion, oceanographic equipment, ocean property

ABSTRACT: Several questions are considered on the methodology of determining paint cloud areas, released into the ocean during diffusion process studies and registered on film. For this purpose area measurements were performed on pictures of specially constructed figures of complicated configurations. The planimeter errors as a function of image intensity, enlargement scale, etc. were evaluated. The effective radius of a paint spot is determined by its area, which permits evaluation of the diffusion coefficient K of the spot. Experiments with point sources of paint performed in the Black Sea gave a value of K in the range 2.6--7.5 cm<sup>2</sup>/sec. The average radii of the experimental spots did not exceed several decimeters. R. Ozmido<sup>v</sup> [Translation of abstract]

SUB CODE: 08

Card 1/1

KELANTHANE, G. R.

L 1584-66 EWT(1)/T/EED(b)-3 IJP(c) GW  
AM5016876 BOOK EXPLOITATION

UR/

62

47

B1

Akademiya Nauk SSSR. Laboratoriya aerometodov gosudarstvennogo geologicheskogo komiteta SSSR

44,55

Methods of studying ocean currents from an airplane (Metody issucheniya morskikh techeniy s samoleta) Moscow, Izd-vo "Nauka", 1964. 227 p. illus., biblio., append. Errata slip inserted. 1100 copies printed. Managing editor: Doctor of Technical Sciences V. G. Zdanovich; Editor of the publishing house: Ye. A. Semenova; Technical editor: G. P. Aref'yeva; Proofreaders: A. A. Ginsburg, G. A. Miroshnichenko, A. Kh. Saltanayeva

TOPIC TAGS: photogrammetry, oceanography, aerial photography, ocean current

44,12 55,12 20,44,55

PURPOSE AND COVERAGE: This book was intended for specialists in the fields of photogrammetry and oceanography concerned with studying oceanic currents by means of aerial photography. The theory and the practice of basic aerial methods of measuring ocean currents are presented (method of single floats and the method of bottom indicators), and the problems of producing the associated aerial observations are analyzed. For each method, its theoretical foundations are outlined, the equipment required is described, the procedures involved in flight photography

Card 1/2

L 1584-66

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15

and development of the aerial photographs are analyzed, and the accuracy of the results is evaluated. The book is based on work carried out by the Laboratoriya Aerometodov of the GGK SSSR in recent years. The work was done by Laboratoriya personnel, including Professor V. G. Zdanovich, Senior Scientific Colleague Candidate of Technical Sciences Yu. D. Sharikov<sup>445</sup>, and Junior Scientific Colleagues A. I. Babkov and O. A. Yurkovskiy. Candidate of Technical Sciences G. R. Rekhtzamer,<sup>445</sup> Docent at the Leningradskiy Gidrometeorologicheskij Institut, also participated in the work.

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Ch. I. Measuring currents by means of single floats --	12
Ch. II. Measuring currents with the use of bottom indicators --	121
Ch. III. Aerovisual observations of the sea's surface --	141
Appendices --	169

SUB CODE: ES

SUBMITTED: 25Nov64

NR REF Sov: C80

OTHER: 019

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L 12831-65 EWT(1)/T/EED(b)-3 Pae-2 IJP(c)/SSD/AS(mp)-2/AFWL/AFTC(p)/  
ASD(a)-5/AFETR/AEDC(a)/ESD(gs)/ESD(t) MJW/GW  
ACCESSION NR: AR4047588 S/0169/64/000/009/V005/V005

B

SOURCE: Ref. zh. Geofizika, Abs. 9V28

AUTHOR: Zhukov, L. A., Mayyer, A. B., Rekhtzamer, G. R.

TITLE: Use of an underwater photographic and movie survey for investigation of  
turbulence in the sea

CITED SOURCE: Sb. Materialy\* 2 Konferentsii po probl. Vzaimodeystviye atmosf. i  
gidrosf. v sev. chasti Atlant. okeana. L., Leningr. un-t, 1964, 151-155

TOPIC TAGS: oceanography, underwater photography, sea turbulence, microphoto-  
meter, diffusion coefficient

TRANSLATION: Specialists of the Leningradskiy gidrometeorologicheskiy institut  
(Leningrad Hydrometeorological Institute) carried out a series of experiments  
in the Black Sea in the summer of 1960 to perfect the method and determine the  
principal characteristics of turbulence. The coloring agent used was a black,  
sulfide dye. The survey was made against the background of a rectangular grid  
(grid squares measuring 25 x 25 cm), stretched on a frame measuring 2 x 4 m.  
When operating at shallow depths (20-30 m) the frame and movie camera were attached

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ACCESSION NR: AR4047588

to a mast; at greater depths the screen was attached to a cable extending between the anchor and a submerged buoy. The still photographs were taken with a "Lenin-grad" camera and the movies with a "Konvas-avtomat" camera. The photographic survey was accompanied by determinations of wave intensity, temperature, salinity, illumination and water transparency. The boundaries of the visible part of the cloud were determined using a MF-2 microphotometer. The following expression was derived for finding the radius of the visible part of the spectrum:

$$r = 2 \left( k + \ln \frac{Qa}{4\pi\delta k} \right)^{1/2}$$

where  $k$  is the diffusion coefficient,  $Q$  is the quantity of matter, and  $\zeta$  is the sensitivity of the microphotometer. The vertical distribution of the diffusion coefficient, computed using this formula, is in agreement with the vertical temperature distribution. Isolines of the concentration of matter were drawn for determination of the internal structure of the cloud. It was found that the upper part of the cloud diffuses more rapidly than the lower part. N. Glinsky

ASSOCIATION: None

SUB CODE: ES

ENCL: 00

Card 2/2

DOROGOCHINSKIY, Akiyiv Zinov'yevich; LYUTER, Aleksandr Valentinovich;  
VOL'POVA, Yevgeniya Grigor'yevna; REKHLASHVILI, Antonina  
Nikolayevna; KOLESNIKOV, F.M., red.; KUZ'MENKOVA, N.T.,  
tekhn. red.

[Oil gases in the Chechen-Ingush and other economic regions  
of the Northern Caucasus] Neftianye gazy Checheno-Ingushskogo  
i drugikh ekonomicheskikh raionov Severnogo Kavkaza. Groznyi  
Checheno-Ingushskoe knizhnoe izd-vo, 1960. 259 p.  
(MIRA 16:3)

(Caucasus, Northern--Gas, Natural)

KAZANSKIY, B.A.; DOROGOCHINSKIY, A.Z.; SIERLIGOV, O.D.; LYUTER, A.V.;  
DMITRIYEVSKIY, M.L.; NAZAROVA, M.P.; REKVIASHVILI, A.N.

Studying the dehydrogenation of isopentane on K-544 and K-5  
finely divided catalysts. Trudy GrozNII no. 15:241-253 '63.  
(MIRA 17:5)

ACC NR: AT6032742

SOURCE CODE: UR/0000/66/000/000/0135/0139

AUTHOR: Lursmanashvili, O. V.; Rekhviashvili, G. P.

ORG: none

TITLE: Portable UPP-L4 device to measure longitudinal wave velocity on small-base lines

SOURCE: AN SSSR. Institut fiziki Zemli. Geoakustika; ispol'zovaniye zvuka i ul'trazvuka v seismologii, seismorazvedke i gornom delo (Geoacoustics; the use of sound and ultrasound in seismology, seismic prospecting, and mining). Moscow, Izd-vo Nauka, 1966, 135-139

TOPIC TAGS: seismologic instrument, shock wave velocity, /UPP-L4  
seismoscope, seismic wave propagation, longitudinal wave  
seismologic instrument

ABSTRACT: Technical specifications of the portable UPP-L4 seismometer used to measure longitudinal wave velocity are given. The UPP-L4 consists of PK-1 and PK-2 piezo-electric crystals, a buffer stage, trigger, and generator. Technical specifications are as follows: 1) measurement limits of wave lag, 5—150 sec; 2) natural crystal frequency, 75 kc; 3) pulse frequency, 50 cps; 4) power supply, 6v (5 NKN-10 battery); 5) current, 0.8 amp; 6) weight, 2.5 kg; and 7) size 32 x 21 x 6 cm. Orig. art. has: 2 figures.

SUB CODE: 08/ SUBM DATE: 28Mar66/ ORIG REF: 001/

Card 1/1

REKHLASHVILI, R. I.

Case of retinoblastoma. Sbor. nauch. trud. SOGMI no. 14:209-  
211 '63. (MIRA 18:9)

1. Glaznoye otdeleniye Respublikanskoy bol'nitsy. Ordzhonikidze.  
Nauchnyy rukovoditel' - prof. M. N. Bugulov.

S/124/62/000/001/019/046  
D237/D304

AUTHOR: Rekin, A. D.

TITLE: Fluid film cooling of surfaces in a turbulent stream of hot gas

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 1, 1962,  
71, abstract 1B515 (Tr. Mosk. fiz.-tekhn. in-ta,  
1960, no. 5, 77-85)

TEXT: The influence of evaporation on the heat transfer coefficient in the flow of laminar fluid film along a thermally insulated plate is investigated. Rate of evaporation is assumed small and radiation effects are neglected. Generalized Reynolds, Nusselt and Prandtl No.'s, with diffusion taken into account, are obtained by the method of dimensional analysis. The coefficient of heat transfer to the fluid film is determined, using the analogy between heat transfer and mass and amount of motion in the turbulent layer. An approximate quantitative description is

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S/124/62/000/001/019/046  
D237/D304

Fluid film cooling...

given of various regions of the flow of the fluid film, agreeing satisfactorily with experimental data. [Abstracter's note:  
Complete translation.]

✓

Card 2/2

ACC NR: AT7003570

SOURCE CODE: UR/0000/66/000/000/0275/0280

AUTHOR: Rekin, A. D.

ORG: Central Institute for Aviation Engine Construction im. P. I. Baranov (Tsentral'nyy institut aviationsionnogo motorostroyeniya)

TITLE: Flow stability of a liquid film moving on a wall under the action of turbulent gas flow

SOURCE: AN BSSR. Institut teplo- i massoobmena. Issledovaniye teplo- i massoobmena v tekhnologicheskikh protsessakh i apparatakh (Study of heat and mass transfer in technological processes and apparatus). Minsk, Izd-vo Nauka i tekhnika, 1966, 275-280

TOPIC TAGS: liquid flow, surface film, film lubrication

ABSTRACT: The flow stability of a liquid film moving on a surface under the action of a turbulent flow of air was investigated. The investigation supplements the results of E. L. Knuth (Jet Propulsion, 24, N 6, 1954). The following liquids were investigated: water, ethyleneglycol, aqueous solution of glycerin, and soap OP-7. The experimental surface, (of stainless steel) was treated after the method of C. F. Warner and B. A. Reese (Jet Propulsion, 27, N 8, 1957). The nature of the liquid film motion was determined visually; the experimental results are presented graphically (see Fig. 1). It was found that the critical Reynolds number  $Re$  was given by

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ACC NR: AT7003570

Fig. 1. Boundary of separation of smooth (I) and perturbed (II) surfaces: 1 - water; 2 - soap solution (2%); 3, 4 - glycerin solutions (28 and 49%); 5 - ethyleneglycol; 6 - water (reference - 1: G. R. Kinney, A. E. Abramson, and I. L. Sloop. NACA Report 1087, 1952); 7 - water (reference - 2: E. L. Knuth. Jet Propulsion, 24 N 6, 1954); 8 - sugar solution (reference - 2); 9 - equation (1).

$$Re^* = \begin{cases} \frac{50}{\eta} a^3 & \text{for } \eta > 50, \\ \eta & \\ a^3 & \text{for } \eta \leq 50. \end{cases} \quad (1)$$

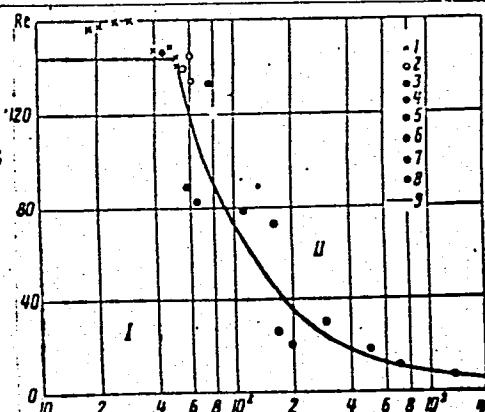
where  $\propto$  is Karman's constant and  $\eta$  the relative viscosity of the liquid. The equation of motion for neutral vibrations of the liquid film was found to have the form

$$We \left[ 1 - \left( \frac{Re^*}{Re} \right)^{\frac{n+2}{n+1}} \right] = 2 \frac{n+2}{n}. \quad (2)$$

where We is the Weber's number, Re is the Reynolds number, and n is a constant. Orig. art. has: 3 graphs and 3 equations.

SUB CODE: 20, 11/ SUBM DATE: 23Jul66/ OTH REF: 004

Card 2/2



REKIN, A.D.

Liquid-film cooling of surfaces around which a turbulent flux of  
hot air is flowing. Trudy MFTI no.5:77-85 '60. (MIRA 13:10)  
(Jet planes--Engines--Cooling) (Heat--Transmission)

RUDZIT, R. B. [Rudzits, R.]; BAKSHAS, Ya. A. [Baksas, J.];  
BUMBIYERIS, E. V. [Bumbieris, E.]; REKIS, D. M.

T-welding of relay contacts. Avtom. svar. 16 no. 3:79-83  
(MIRA 16:4)  
Mr '63.

1. Institut avtomatiki i mekhaniki AN Latviyskoy SSR (for  
Rudzit, Bakshas, Bumbyeris). 2. Gosudarstvennaya elektro-  
tekhnicheskaya fabrika, Riga (for Rekis).

(Electric contactors--Welding)

ACC NR: AT7007350

(A)

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AUTHOR: Rudzit, R. B.; Bumbiyeris, E. V.; Rekis, D. M.

ORG: None

TITLE: Automatic welding of silver contacts

SOURCE: Soveshchaniye po avtomatizatsii protsessov mashinostroyeniya. 4th, 1964.  
Avtomatizatsiya protsessov svarki i obrabotki davleniyem (Automation of welding and  
pressure treatment processes); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1966, 90-95

TOPIC TAGS: automatic welding, welding technology, electric relay, telephone equipment

ABSTRACT: A reliable method is proposed for controlling the welding cycle to produce silver contacts for telephone-type relays (Figure 1). Experimental data show that capacitor welding results in contacts with erratic strength properties, while AC welding with the PIT-50-2 interrupter produces contacts with more stable strength properties but without the proper shape due to shrinkage. The double-pulse ignitron interrupter shown in Figure 2 is developed to provide the proper welding cycle with respect to pulse duration and stabilization of the initial state of the weld zone. Two ignitrons with controlled thyatrons connected in the ignition circuits are used for current commutation. A phase shifter is used for controlling the ignition angle of the ignitron which passes the first half-period within a range of 44-127°. The power unit

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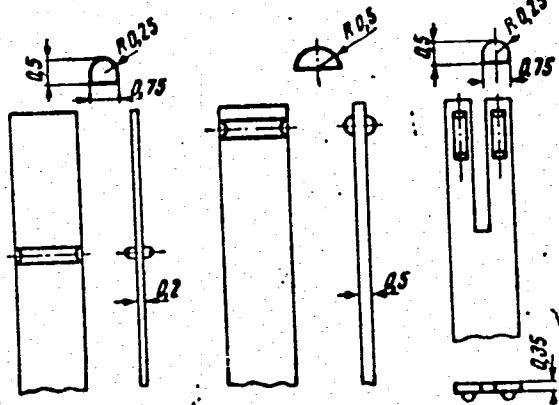


Fig. 1

P is made up of the welding transformer and ignitron contactor. Control units CUII and CUI consisting of igniting thyatrons with semiconductor triggers in their grid circuits are used for controlling the ignition circuits of the ignitrons. Trigger signal unit TSU is composed of a time relay for preliminary delay to heat the thyatron.

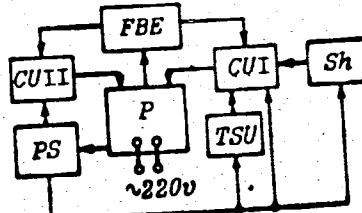


Fig. 2

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cathodes, an actuating button connected to a cam on the distributor shaft of the semi-automatic welder and an intermediate relay. Heating pulse shaper Sh is made up of a phase-shifting bridge, a transistor which generates square pulses, and a pulse transformer in the collector circuit with secondary winding connected in the grid circuit of a thyratron. The feedback element FBE is a step-down transformer connected in parallel with the primary winding of the welding transformer. The secondaries of this transformer are connected in the base-emitter circuits of the controlled trigger transistors. The circuit is fed by power supply PS. The thyratrons are triggered by positive pulses from the shaper. The control system incorporates semiconductors and printed circuits. Automation of the welding process is discussed and the kinematic chain of the semiautomatic welder and electrical circuit of the automatic controller are described. Orig. art. has: 7 figures.

SUB CODE: 13/ SUBM DATE: None

09/

Card 3/3

VASIL'YEV, N.N.; REKIS, L.Ye., red.

[Semiconductor devices; summary of lectures] Poluprovod-  
nikovye pribory; konspekt lektsii. Moskva, Red.-izd. ot-  
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[A manual on a senior-year course in "Telegraph communication"]  
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for second year students of technical departments] Posobie  
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KODYNSKIY, Sergey Afanasyevich; REKIS, L.Ye., red.

["Organic and high-molecular compounds and plastics": a textbook for the students of all departments] "Organicheskie i vysokomolekulyarnye soedineniya i plastmassy"; uchebnoe posobie dlia studentov vsekh fakul'tetov. Moscow, 1962. 24 p. (MIRA 17:3)

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AUTHORS:

Dem'yanchuk, A.S., Shifman, M.Ye., Rekitar, M.I. 32-24-6-25/44

TITLE:

The Photographic Method of Analyzing Iron- and Nonferrous Alloys  
on the Spectrograph ISP-51 (Fotograficheskiy metod analiza  
chernykh i tsvetnykh splavov na spektrografe ISP-51)

PERIODICAL:

Zavodskaya Laboratoriya, 1958, Vol 24, Nr 6, pp 751-752 (USSR)

ABSTRACT:

As the most sensitive spectral lines of alkali metals and alkaline earth metals are within the visible spectral range, it is obvious that the determination of Al, Cr, Ti and other elements in iron alloys be carried out within this range, for which purpose the spectrograph mentioned in the heading can be used. The optimum conditions for analyses carried out by means of the spectrograph mentioned are given as well as a table showing the pairs used in the analysis of iron alloys, the entire analysis of the alloys being carried out according to one spectrogram. The spectral analysis of aluminum alloys is carried out under the same conditions with the only difference that the current of the light arc is somewhat weakened and that the time for previous irradiation is reduced. The pairs of lines for determinations of this kind are also given, and it is said in this connection that concentrations

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The Photographic Method of Analyzing Iron- and  
Nonferrous Alloys on the Spectrograph ISP-51

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of 0.001-0.01% of admixtures can be determined, which is sufficient to satisfy the demands made by the industry and, in many cases, by scientific work. The method of three etalons was employed, for which purpose the etalons VA MI No 2,4,5 and the brands AL 9 and A 140 were used. The relative error is mentioned as amounting to 4% and the two methods mentioned are being employed by the plant mentioned below for serial analyses. There are 2 tables, and 1 reference, 1 of which is Soviet.

ASSOCIATION: Kiyevskiy mekhanicheskiy zavod (Kiyev Machine Plant)

1. Aluminum alloys--Spectrographic analysis 2. Iron alloys  
--Spectrographic analysis 3. Metals--Determination

Card 2/2

DESIDLEY, I.V.; KHRAPUNOV, L.G.; REKITAR, M.I.

Tires with a reduced number of plies. Kauch. i rez. 23 no. 12:30-31  
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Ways of increasing the profitability of the municipal public  
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V.A., inzh.; SOKOLOV, V.D., inzh.; KLESCHCHINSKIY, B.K., inzh.;  
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G.M., retsenzent; SHPOLIANSKIY, M.N., otv. red. toma; VOLOCHNEV,  
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LELYUKHIN, A.A., tekhn. red.

[Technical manual on city electric transportation in three  
volumes] Tekhnicheskii spravochnik po gorodskomu elektro-  
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(Building materials) (Walls)

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